

LACKAWANNA COUNTY PENNSYLVANIA

Interim Soil Survey Report

Volume II SOIL MAPS



Prepared By
UNITED STATES DEPARTMENT OF AGRICULTURE
Soil Conservation Service

In Cooperation With
THE PENNSYLVANIA STATE UNIVERSITY
College of Agriculture

PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL RESOURCES
Soil and Water Conservation Commission

HOW TO USE THIS REPORT

1. Use the Photo Index Map in Volume II.

The small county map shows the location of the survey area and serves as an index to the aerial photo soil survey field sheets. The survey area is subdivided into numbered blocks. The number inside the block corresponds to the aerial photo number used for the soil survey. Locate the general area in which you are interested on the map and note the aerial photo number.

2. Use the Aerial Photo Soil Survey Maps in Volume II.

Turn to the Soil Survey Maps, and look up the proper map. When the correct map has been found, locate the specific area on the map which you want to study. Soil boundaries are outlined by black lines, with a symbol for each soil mapping unit. (See list of symbols). The symbol is inside the soil boundary if there is enough room; otherwise, it is outside the area and a pointer shows the area where the symbol belongs. Make a note of the soil mapping unit symbol occurring in the specific area which you have selected.

3. Use Table 1 in either volume to find soil name.

Look up the map symbol along the left-hand column. The symbols are listed numerically. When you have located the mapping symbol, read across for the soil name. (Some mapping symbols have been combined with others to reduce and correlate the units for which interpretations are made.)

4. Use the Interpretive Tables in Volume I.

After noting the soil name from Table 1, you are ready to look up (alphabetically) the brief soil series descriptions or soil interpretations in any of the tables in Volume I. Refer to the list of tables in the Table of Contents for the page number of the table you want to use. Narratives explaining the interpretations precede each table.

FOREWORD

The USDA Soil Conservation Service has been making soil surveys for over three decades. Historically, these soil surveys were used almost solely for agricultural purposes. Today, soil surveys have a much broader scope. Soil surveys are now being interpreted for community development, engineering and recreational uses, in addition to agriculture, woodland and wildlife uses. They are multipurpose surveys designed for a wide variety of users ranging from farmers to loan agents and from community planners to contractors.

This soil survey was made cooperatively by the United States Department of Agriculture, Soil Conservation Service; The Pennsylvania State University, (College of Agriculture); and the Pennsylvania Department of Environmental Resources, State Soil and Water Conservation Commission.

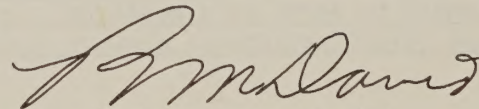
This special report is designed to provide basic soils data during the interim period between the completion of field mapping and the publication of the soil survey. The Lackawanna County Soil Survey will be published as a part of the National Cooperative Soil Survey when the entire area is surveyed.

This report will be a helpful guide to local people in developing comprehensive land use plans for their communities. Properly used, this report can help the Lackawanna County Regional Planning Commission, the Lackawanna County Soil and Water Conservation District, township officials, planning consultants, engineers, farmers, homeowners, developers and others to make better use of their soil resources.

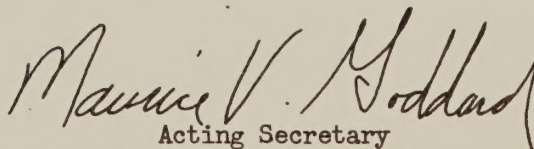


Dean

College of Agriculture
The Pennsylvania State University



State Conservationist
Soil Conservation Service
United States Department of Agriculture



Acting Secretary
Pennsylvania Department of Environmental Resources

INTRODUCTION

This report contains soil interpretations (Volume I) and soil maps (Volume II) for all the different kinds of soils in Lackawanna County. Lackawanna County is in eastern Pennsylvania. It is bordered on the north by Susquehanna County, on the east by Wayne County, on the south by Monroe County, and on the west by Luzerne and Wyoming Counties.

This report will furnish users with copies of field soil maps and soil interpretations on an interim basis until the publication of a soil survey at a later date. Information contained herein provides soils information needed for use by soil and water conservation districts, soil conservationists, county agents, farmers, home owners, planning commissions, government officials, planning consultants, and others. This information is useful as a guide for regulating good land use and management for the benefit of the county and its communities.

Lackawanna County has some of the most rapidly developing areas in northeastern Pennsylvania. New homes, shopping centers, schools, industrial plants and roads are being constructed to meet the demands of the increasing population on lands formerly used for agriculture. Much of the area is not served by municipal water or sewage. Soil problems involving on-site sewage disposal, water supply, basement and foundation excavations, road construction and other land uses occur in this area. Shallow, slowly permeable, steep and wet soils have the most severe use limitations throughout the area. In addition, acid spoil and wastes from the coal mining industry present special problems.

Soil interpretations for engineering, community and recreational development, cropland, wildlife and woodland, based on field soil surveys and laboratory tests, are included in this report. These interpretations will aid the users in preparing general county and community plans. The information in this report is not intended to eliminate on-site investigations. It is intended to serve as a guide for screening sites and for planning more detailed investigations at minimum costs.

VOLUME II

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General Soil Map

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GENERAL SOIL MAP

The general soil map shows the soil association in Lackawanna County. A soil association is a landscape that has a distinctive proportional pattern of soils. It normally consists of one or more major soils and at least one minor soil, and it is named for the major soils. The soils in any one association may occur in another association, but in a different pattern.

A map showing soil associations is useful to people who want a general idea of the soils in a county, who want to compare different parts of the county, or who want to know the location of large tracts that are suitable for a certain kind of farming or other land use. Such a map is not suitable for planning the management of a farm or field, because the soils in any one association ordinarily differ in depth, stoniness, drainage, or other characteristics that affect management.

Descriptions of the ten soil associations in Lackawanna County are given below:

VERY STONY LAND-ARNOT-LORDSTOWN ASSOCIATION: This association consists of nearly level to very steep, shallow and moderately deep, well drained grayish brown soils and land type on the mountain plateaus and ridges, principally in the southwest part of the county in the Moosic mountains and near Bald mountain. Extensive areas of rock outcrop are common.

Very stony land makes up 50 percent of this association. It is mostly on mountain tops and on very steep rock ledges. Arnot soils make up 23 percent of this association. These are shallow soils on mountain tops and adjoining slopes. Lordstown soils make up 7 percent of this association. These are moderately deep soils. Most extensive of the minor soils in the association are Volusia, Mardin, Wurtsboro and Bath.

Most of this association is used as woodland or for wildlife and recreation.

VERY STONY LAND-ARNOT-SWARTSWOOD ASSOCIATION: This association consists of nearly level to very steep, shallow to deep, well drained, dark brown and grayish brown soils and land types on the mountain plateaus, ridges, and foot slopes in the Moosic mountains and near Elmhurst and Moosic. Extensive areas of rock outcrops and bedrock escarpments are common.

Very stony land makes up 41 percent of this association. It is mostly on mountain tops and on very steep rock ledges. Arnot soils make up 34 percent of this association. These are shallow soils on mountain tops and adjoining slopes. Swartswood soils make up 21 percent of this association. These deep soils are on broad, dissected, lower slopes. Most extensive of the minor soils in the association are Volusia and Lordstown, with smaller areas of Alton, Tioga and Middlebury.

Most of this association is in woodland. The areas bordering the Roaring Brook are cultivated or in pasture.

ARNOT-VOLUSIA-VERY STONY LAND ASSOCIATION: This association consists of nearly level to very steep, shallow to deep, well drained to somewhat poorly drained, grayish brown soils, and miscellaneous land type on rolling hills and mountain tops and adjacent slopes southeast of Carbondale and in the vicinity of Tompkinsville. Mountain plateaus with numerous rock outcrops and bedrock escarpments are typical features of the landscape. Numerous reservoirs are located in stream channels of this area.

Arnot soils make up 36 percent of this association. These are shallow soils less than 20 inches deep to bedrock. Volusia soils make up 23 percent of this association. These soils are generally on the lower slopes and are subject to surface runoff from the adjoining higher slopes. Very stony land makes up 23 percent of this association. Most of this land type is on the mountain tops, ridges and escarpments. Minor soils in the association are Wurtsboro, Lordstown, Mardin and Swartswood.

Most of this association is used as woodland with small areas in cropland, pasture and apple orchards.

WELLSBORO-MORRIS-OQUAGA ASSOCIATION: This association consists of nearly level to very steep, deep, moderately well drained and somewhat poorly drained dark brown soils, and moderately deep, well drained reddish soils on rolling hills and mountain side slopes scattered throughout the county. Nearly level to moderately steep ridges and mountain sides in the west, with less uniform slopes and higher ridges in the south, are typical of this association. The association has numerous streams and reservoirs or lakes and ponds. The larger lakes and ponds are in the northern part of the county near the adjoining Susquehanna County.

Wellsboro soils make up 32 percent of this association. These soils are on the higher convex slopes. Morris soils make up 12 percent of this association. These soils are principally in the lower sloping areas and subject to much surface water runoff accumulation. Oquaga soils make up 11 percent of this association. They occupy the higher mountain slopes and are moderately deep to bedrock. Rock outcrops are common. Most extensive minor soils in this association are Arnot, Lackawanna, Norwich and Chippewa.

In the western, northern and eastern portions, this association is mainly in cropland and pasture. Woodland occupies about one fourth of the western, eastern and northern portions, while the remaining areas are rural or urbanized. The southern portion of this association is mostly in woodland with small areas cleared and cultivated.

MARDIN-LORDSTOWN-VOLUSIA ASSOCIATION: This association consists of nearly level to moderately steep, moderately deep and deep, well drained to somewhat poorly drained grayish brown soils of dissected uplands. This association occurs as scattered, finger-like projections in the west, northwest and eastern portions of the county. Uplands and mountain plateaus, dissected by streams are typical of this association. Floodplains of most streams are narrow. The eastern area has many wet depressions.

Mardin soils make up 33 percent of this association. These soils occur on the more convex slopes of the landscape. Lordstown soils make up 30 percent of this association. These soils are on the higher elevations. They are moderately deep to bedrock and contain numerous rock outcrops. Water seeps and springs are common on the steeper slopes. Volusia soils make up 21 percent of this association. These are mostly nearly level to gently sloping soils on the lower portions of the landscape. Surface runoff water tends to accumulate on these soils. Most extensive of the minor soils are Arnot, Bath, Alton and Holly.

Land use is about equally divided between cropland and woodland.

VOLUSIA-ARNOT-MARDIN ASSOCIATION: This association consists of nearly level to moderately steep, shallow to deep, well drained to somewhat poorly drained grayish brown soils of dissected rolling uplands. It is in a narrow discontinuous band in the northwestern part of the county.

Volusia soils make up 37 percent of this association. These soils are on the sloping to nearly level areas where surface water runoff tends to accumulate. Arnot soils make up 22 percent of this association. These soils are on the higher convex positions in the landscape where the soil is less than 20 inches deep over bedrock. Rock outcropping is frequent. Mardin soils make up 20 percent of this association. These are sloping soils on the more convex slopes. They are less subject to accumulation of surface water runoff than Volusia soils. Most extensive of the minor soils are Lordstown, Bath and Wurtsboro.

Most of this association is used for cropland with lesser amounts in woodland.

MARDIN-BATH-VOLUSIA ASSOCIATION: This association consists of gently sloping to moderately steep, deep, well drained to somewhat poorly drained stony soils of dissected rolling uplands of the glaciated low plateau of the southeast part of the county. This association contains many streams and low circular depressions.

Mardin soils make up 35 percent of this association. In some places these soils are subject to accumulation of moderate amounts of surface water runoff. Bath soils make up 25 percent of this association. These soils are scattered throughout the area at the higher elevation. Volusia soils make up 15 percent of this association. These soils are predominantly on the lower sloping areas near depressions. They are subject to surface water runoff accumulation. Most extensive of the minor soils are Arnot, Lordstown, Swartswood and Wurtsboro.

Most of this association is in woodland.

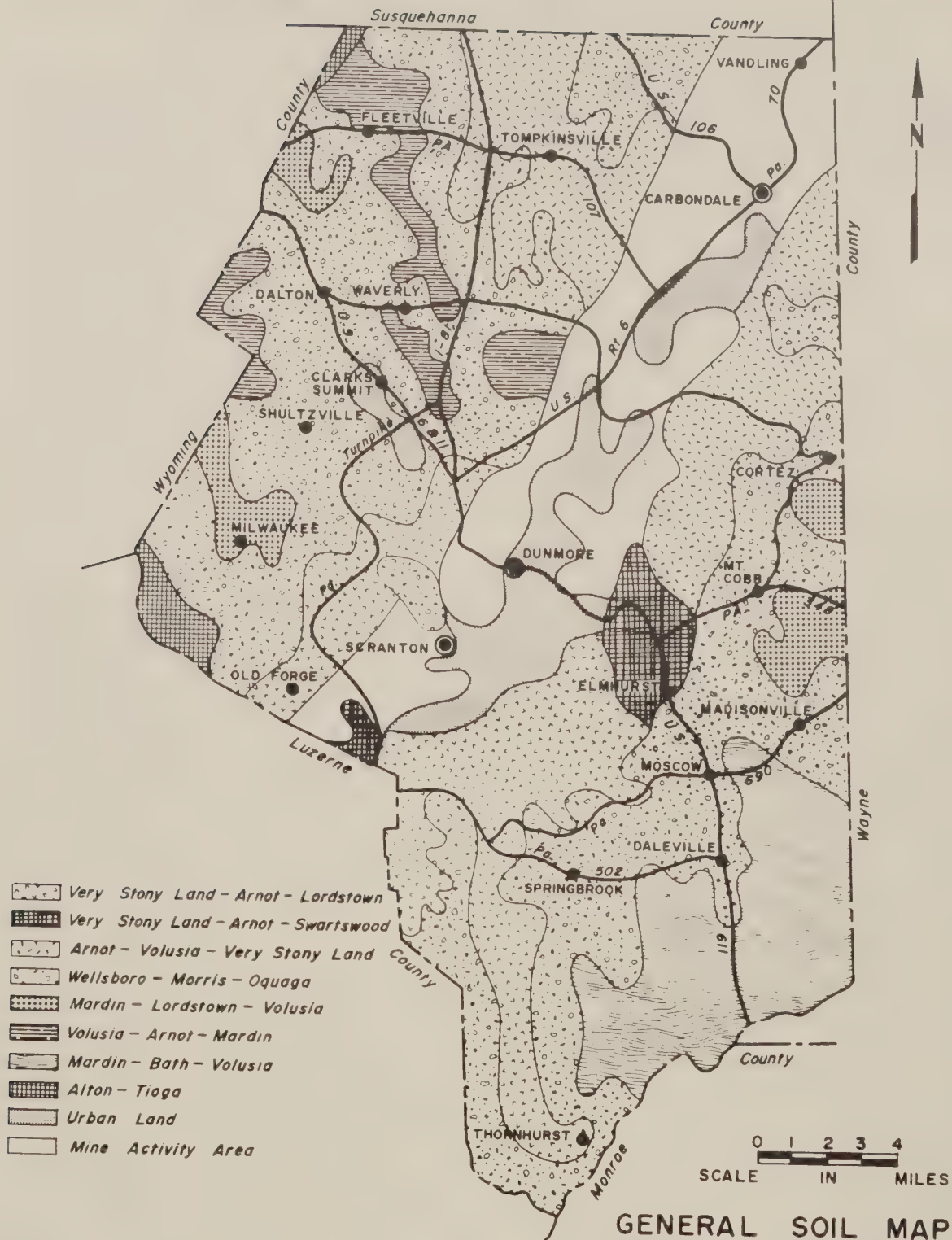
ALTON-TIOGA ASSOCIATION: This association consists of nearly level to very steep, deep, well drained soils of floodplains and terraces near the river and major creeks of the western portions of the county. Alton soils make up

60 percent of this association. These soils are on the terrace and kame-kettle formations above the floodplain. Tioga soils make up 24 percent of this association. These soils are on the floodplains. Most extensive of the minor soils are Middlebury, Oquaga and Wellsboro.

URBAN LAND ASSOCIATION: This association consists of land used for housing developments, shopping centers, public facilities, roads and railroads. Few areas exist where the natural soil has not been built upon, dug out, or otherwise disturbed.

MINE ACTIVITY AREA ASSOCIATION: This association consists of areas disturbed during surface strip mining operations, and mine dumps created during coal breaker operations. It is located in the Lackawanna Valley and bordering ridges. Long troughs or pits with the stripped soil and bedrock materials placed as a berm along the edge of the pits or dumped in cone-shaped forms within the larger pits, as well as mounds of carbonaceous materials, and burned or burning carbonaceous mounds scattered throughout this area, typify this association.

Strip mine spoil makes up 71 percent of this association. Most of the lower sloping areas have revegetated naturally to trees or grasses. The higher, steeper slopes remain unvegetated. Mine dump makes up 26 percent of this association. This mixed, carbonaceous material of coal and shaly rock fragments may have some small size birch trees growing in them. This provides the only vegetative cover. Mine dump, burning or burned, makes up 3 percent of the association. These are mounds of carbonaceous material that are burning or have been burned. The hue of this material is red, distinguishing it from the black carbonaceous mine dumps. This material remains unvegetated.



GENERAL SOIL MAP

LACKAWANNA COUNTY PENNSYLVANIA

PREPARED BY:

Lackawanna County Regional Planning Commission

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U.S. Dept. Of Agriculture Soil Conservation Service

The preparation of the map was financed in part through a comprehensive planning grant from the Department of Housing and Urban Development, under the provision of Section 701 of the Housing Act of 1954, as amended and as administered by the Bureau of Planning Pennsylvania Department of Community Affairs.

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I

LACKAWANNA

COUNTY, PENNSYLVANIA

PAGE 1 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
1	Tioga soils	659
2	Tioga soils, high bottom	255
3	Middlebury silt loam	626
4	Holly silt loam	1,801
5	Papakating silt loam	1,661
6	Mixed alluvial land	1,333
7	Riverwash	-
13A	Alton gravelly sandy loam, 0 to 3 percent slopes	514
13-A-1	(Combined with 13A)	-
13B	Alton gravelly sandy loam, 3 to 8 percent slopes, moderately eroded	1,988
13-B-1	(Combined with 13B)	-
13C	Alton gravelly sandy loam, 8 to 15 percent slopes, moderately eroded	792
13-C-1	(Combined with 13C)	-
13D	Alton gravelly sandy loam, 15 to 25 percent slopes, moderately eroded	795
13-D-1	(Combined with 13D)	-
13-E-1	(Combined with 13E)	-
13F	Alton gravelly sandy loam, 25 to 75 percent slopes, moderately eroded	332
14-A-1	(Combined with 13A)	-
14B	Unadilla silt loam, 3 to 8 percent slopes	-
14-B-2	(Combined with 13B)	-
14C	Unadilla silt loam, 8 to 15 percent slopes	-
16A	Braceville gravelly loam, 0 to 3 percent slopes	40
16-A-1	(Combined with 16A)	-
16B	Braceville gravelly loam, 3 to 8 percent slopes, moderately eroded	133
16-B-1	(Combined with 16B)	-
17A	Red Hook loam, 0 to 3 percent slopes	164
17-A-1	(Combined with 17A)	-
17B	Red Hook loam, 3 to 8 percent slopes, moderately eroded	160
18A	Atherton loam	401

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I

LACKAWANNA COUNTY, PENNSYLVANIA

PAGE 2 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
1A-A-1	(Combined with 1A)	-
21B		
21-B-1	(Combined with 71B)	-
21C		
21-C-2	(Combined with 71C)	-
21D		
21-D-2	(Combined with 71D)	-
22B		
22-B-1		
22-B-2	(Combined with 72B)	-
22C		
22-C-1		
22-C-2	(Combined with 72C)	-
22D		
22-D-2	(Combined with 71D)	-
22-E-2	(Combined with 73F)	-
23-A-1		
23B	(Combined with 73B)	-
23-C-1		
23D	(Combined with 73D)	-
23-EF-1		
23F	(Combined with 73F)	-
24-A-1		
24-B-1		
24-B-2	(Combined with 71B)	-
24-C-1		
24-C-2	(Combined with 71C)	-
25B		
25-B-2	(Combined with 75B)	-
25C		
25-C-2	(Combined with 75C)	-
25-C-3		
25D		
25-D-2		
25-D-3	(Combined with 75D)	-
26B		
26-B-1		
26-B-2	(Combined with 76B)	-
26C		
26-C-1		
26-C-2	(Combined with 76C)	-
26D		
26-D-2	(Combined with 75D)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I

LACKAWANNA COUNTY, PENNSYLVANIA

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MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
27-AP-1 27P	(Combined with 77P)	-
27-CD-1 27P	(Combined with 77D)	-
28-B-2	(Combined with 75P)	-
28-C-2	(Combined with 75C)	-
28-D-2	(Combined with 75D)	-
31A	Morris channery loam, 0 to 3 percent slopes	1,453
31-A-1	(Combined with 31A)	-
31P	Morris channery loam, 3 to 8 percent slopes, moderately eroded	11,425
31-P-1 31-P-2	(Combined with 31P)	-
31C	Morris channery loam, 8 to 15 percent slopes, moderately eroded	4,403
31-C-1 31-C-2	(Combined with 31C)	-
31D	Morris channery loam, 15 to 25 percent slopes, moderately eroded	279
31-D-2	(Combined with 31D)	-
32A 32-A-1	(Combined with 31A)	-
32P	Morris flaggy loam, 3 to 8 percent slopes	3,325
32-P-1 32-P-2	(Combined with 32P)	-
32C	Morris flaggy loam, 8 to 15 percent slopes, moderately eroded	1,637
32-C-1 32-C-2	(Combined with 32C)	-
32D 32-D-2	(Combined with 31D)	-
33B	Morris very stony loam, 0 to 8 percent slopes	7,262
33-AB-1 33-AB-2	(Combined with 33B)	-
33-CD-1	(Combined with 33D)	-
33D	Morris very stony loam, 8 to 25 percent slopes	2,339
35A	Norwich and Chippewa channery silt loams, 0 to 3 percent slopes	2,190
35-A-1	(Combined with 35A)	-
35B	Norwich and Chippewa channery silt loams, 3 to 8 percent slopes	1,860
35-B-1	(Combined with 35B)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I
LACKAWANNA
COUNTY, PENNSYLVANIA

 PAGE 4 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
37-AB-1	(Combined with 37B)	-
37B	Norwich and Chippewa very stony silt loams, 0 to 8 percent slopes	12,607
41-A-1	(Combined with 41B)	-
41B	Oquaga channery loam, 3 to 8 percent slopes, moderately eroded	1,702
41-B-2	(Combined with 41B)	-
41C	Oquaga channery loam, 8 to 15 percent slopes, moderately eroded	1,725
41-C-2	(Combined with 41C)	-
41D	Oquaga channery loam, 15 to 25 percent slopes, moderately eroded	1,706
41-D-2	(Combined with 41D)	-
42B	Oquaga flaggy loam, 3 to 8 percent slopes	1,353
42-B-1	(Combined with 42B)	-
42-B-2		
42C	Oquaga flaggy loam, 8 to 15 percent slopes, moderately eroded	1,760
42-C-2	(Combined with 42C)	-
42D	(Combined with 41D)	-
42-D-2		
43-AB-1	(Combined with 43B)	-
43B	Oquaga very stony loam, 0 to 8 percent slopes	3,173
43-CD-1	(Combined with 43D)	-
43D	Oquaga very stony loam, 8 to 25 percent slopes	10,736
43-EF-1	(Combined with 43F)	-
43F	Oquaga and Lordstown very stony loams, 25 to 70 percent slopes	8,696
44-B-2	(Combined with 41B)	-
44-C-2	(Combined with 41C)	-
44-C-3		
44-D-2	(Combined with 41D)	-
44-D-3		
45B	Lordstown channery silt loam, 3 to 8 percent slopes, moderately eroded	525
45-B-2	(Combined with 45B)	-
45C	Lordstown channery silt loam, 8 to 15 percent slopes, moderately eroded	465
45-C-2	(Combined with 45C)	-
45-C-3		
45D	Lordstown channery silt loam, 15 to 25 percent slopes, moderately eroded	879

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I

LACKAWANNA

COUNTY, PENNSYLVANIA

PAGE 5 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
45-D-2	(Combined with 45D)	-
45-D-3	(Combined with 45D)	-
45-E-2	(Combined with 43F)	-
46-A-1	(Combined with 46B)	-
46B	Lordstown flaggy silt loam, 3 to 8 percent slopes	255
46-B-2	(Combined with 46B)	-
46C	Lordstown flaggy silt loam, 8 to 15 percent slopes, moderately eroded	381
46-C-2	(Combined with 46C)	-
46D	(Combined with 45D)	-
46-D-2	(Combined with 45D)	-
46-E-2	(Combined with 43F)	-
47-A-1	(Combined with 47B)	-
47B	Lordstown very stony silt loam, 0 to 8 percent slopes	1,117
47-CD-1	(Combined with 47D)	-
47D	Lordstown very stony silt loam, 8 to 25 percent slopes	4,915
47-EF-1	(Combined with 43F)	-
47F	(Combined with 43F)	-
48B	Arnot rocky silt loam, 3 to 8 percent slopes, moderately eroded	2,476
48-B-2	(Combined with 48B)	-
48-B-3	(Combined with 48B)	-
48C	Arnot rocky silt loam, 8 to 15 percent slopes, moderately eroded	1,438
48-C-2	(Combined with 48C)	-
48-C-3	(Combined with 48C)	-
48-CD-1	(Combined with 50D)	-
48D	Arnot rocky silt loam, 15 to 25 percent slopes, moderately eroded	1,463
48-D-2	(Combined with 48D)	-
48-D-3	(Combined with 48D)	-
48-E-3	(Combined with 50F)	-
48-EF-1	(Combined with 50F)	-
48-EF-2	(Combined with 50F)	-
49-B-2	(Combined with 48B)	-
49-C-2	(Combined with 48C)	-
49-C-3	(Combined with 48C)	-
49-D-2	(Combined with 48D)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I

LACKAWANNA

COUNTY, PENNSYLVANIA

PAGE 6 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
40-F-1 40-F-2	(Combined with 50F)	-
40	Arnot very rocky silt loam, 0 to 8 percent slopes	3,759
40	Arnot very rocky silt loam, 8 to 25 percent slopes	11,352
50F	Arnot very rocky silt loam, 25 to 70 percent slopes	2,352
51B	Bath channery silt loam, 3 to 8 percent slopes, moderately eroded	395
51-B-1 51-B-2	(Combined with 51B)	-
51C	Bath channery silt loam, 8 to 15 percent slopes, moderately eroded	381
51-C-1 51-C-2	(Combined with 51C)	-
51D	Bath channery silt loam, 15 to 25 percent slopes, moderately eroded	447
51-D-1 51-D-2	(Combined with 51D)	-
52B	Bath flaggy silt loam, 3 to 8 percent slopes	131
52-B-1 52-B-2	(Combined with 52B)	-
52C	Bath flaggy silt loam, 8 to 15 percent slopes, moderately eroded	130
52-C-1 52-C-2	(Combined with 52C)	-
52D	(Combined with 51D)	-
52-D-1 52-D-2	(Combined with 51D)	-
53-A-1 53-A-2	(Combined with 53B)	-
53B	Bath very stony silt loam, 0 to 8 percent slopes	752
53-B-1 53-B-2	(Combined with 53D)	-
53D	Bath very stony silt loam, 8 to 25 percent slopes	1,324
53F	(Combined with 73F)	-
55-A-1 55-A-2	(Combined with 55B)	-
55B	Mardin channery silt loam, 3 to 8 percent slopes, moderately eroded	1,206
55-B-1 55-B-2	(Combined with 55B)	-
55C	Mardin channery silt loam, 8 to 15 percent slopes, moderately eroded	1,235
55-C-1 55-C-2	(Combined with 55C)	-
55D	Mardin channery silt loam, 15 to 25 percent slopes, moderately eroded	817
55-D-1 55-D-2	(Combined with 55D)	-
56B	Mardin flaggy silt loam, 3 to 8 percent slopes	530
56-B-1 56-B-2	(Combined with 56B)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE 1

LACKAWANNA COUNTY, PENNSYLVANIA

PAGE 7 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
56C	Mardin flaggy silt loam, 8 to 15 percent slopes, moderately eroded	703
56-C-1		
56-C-2	(Combined with 56C)	-
56D		
56-D-2	(Combined with 55D)	-
57-AB-1	(Combined with 57B)	-
57B	Mardin very stony silt loam, 0 to 8 percent slopes	1,369
57-CD-1	(Combined with 57D)	-
57D	Mardin very stony silt loam, 8 to 25 percent slopes	1,902
57Z-AB-1		
57Z-CD-1	(Combined with 88B)	-
61A	Volusia channery silt loam, 0 to 3 percent slopes	1,260
61-A-1	(Combined with 61A)	-
61B	Volusia channery silt loam, 3 to 8 percent slopes, moderately eroded	4,491
61-B-1		
61-B-2	(Combined with 61B)	-
61C	Volusia channery silt loam, 8 to 15 percent slopes, moderately eroded	1,957
61-C-1		
61-C-2	(Combined with 61C)	-
61D	Volusia channery silt loam, 15 to 25 percent slopes, moderately eroded	215
61-D-2	(Combined with 61D)	-
62A	(Combined with 61A)	-
62B	Volusia flaggy silt loam, 3 to 8 percent slopes	1,803
62-B-1		
62-B-2	(Combined with 62B)	-
62C	Volusia flaggy silt loam, 8 to 15 percent slopes, moderately eroded	685
62-C-1		
62-C-2	(Combined with 62C)	-
62D	(Combined with 61D)	-
63-AB-1	(Combined with 63B)	-
63B	Volusia very stony silt loam, 0 to 8 percent slopes	4,461
63-CD-1	(Combined with 63D)	-
63D	Volusia very stony silt loam, 8 to 25 percent slopes	1,566
65A	(Combined with 35A)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE 1
LACKAWANNA COUNTY, PENNSYLVANIA

PAGE 8 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
44B	(Combined with 35B)	-
44B		
44-A7-1	(Combined with 37B)	-
71B	Lackawanna channery loam, 3 to 8 percent slopes, moderately eroded	707
71-B-2	(Combined with 71B)	-
71C	Lackawanna channery loam, 8 to 15 percent slopes, moderately eroded	764
71-C-2	(Combined with 71C)	-
71D	Lackawanna channery loam, 15 to 25 percent slopes, moderately eroded	798
71-D-2	(Combined with 71D)	-
72B	Lackawanna flaggy loam, 3 to 8 percent slopes	78
72C	Lackawanna flaggy loam, 8 to 15 percent slopes, moderately eroded	106
72D	(Combined with 71D)	-
73-AB-1	(Combined with 73B)	-
73B	Lackawanna very stony loam, 0 to 8 percent slopes	1,362
73-CD-1	(Combined with 73D)	-
73D	Lackawanna very stony loam, 8 to 25 percent slopes	3,953
73F	Lackawanna and Bath very stony loams, 25 to 70 percent slopes	2,659
75B	Wellsboro channery loam, 3 to 8 percent slopes, moderately eroded	4,315
75-B-2	(Combined with 75B)	-
75C	Wellsboro channery loam, 8 to 15 percent slopes, moderately eroded	6,160
75-C-2	(Combined with 75C)	-
75D	Wellsboro channery loam, 15 to 25 percent slopes, moderately eroded	2,338
75-D-2	(Combined with 75D)	-
76B	Wellsboro flaggy loam, 3 to 8 percent slopes	1,169
76-B-1		
76-B-2	(Combined with 76B)	-
76C	Wellsboro flaggy loam, 8 to 15 percent slopes, moderately eroded	1,954
76-C-1		
76-C-2	(Combined with 76C)	-
76D	(Combined with 75D)	-
77-AB-1	(Combined with 77B)	-
77B	Wellsboro very stony loam, 0 to 8 percent slopes	4,642
77-CD-1	(Combined with 77D)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE 1

LACKAWANNA COUNTY, PENNSYLVANIA

PAGE 9 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
800	Wellsboro very stony loam, 8 to 25 percent slopes	8,459
82B	Swartswood channery loam, 3 to 8 percent slopes, moderately eroded	1,103
82-B-2	(Combined with 82B)	-
82C	Swartswood channery loam, 8 to 15 percent slopes, moderately eroded	824
82-C-2	(Combined with 82C)	-
82D	Swartswood channery loam, 15 to 25 percent slopes, moderately eroded	414
82-D-2	(Combined with 82D)	-
83-B-1	(Combined with 82B)	-
83-C-2	(Combined with 82C)	-
83-D-2	(Combined with 82D)	-
84-AB-1	(Combined with 84B)	-
84B	Swartswood very stony loam, 0 to 8 percent slopes	1,206
84-CD-1	(Combined with 84D)	-
84D	Swartswood very stony loam, 8 to 25 percent slopes	3,444
86-A-1	(Combined with 86B)	-
86B	Wurtsboro channery loam, 3 to 8 percent slopes, moderately eroded	1,463
86-B-2	(Combined with 86B)	-
86C	Wurtsboro channery loam, 8 to 15 percent slopes, moderately eroded	1,457
86-C-2	(Combined with 86C)	-
86-D-2	(Combined with 86C)	-
87-AB-1	(Combined with 88B)	-
87B	Wurtsboro flaggy loam, 3 to 8 percent slopes	361
87-B-1	(Combined with 87B)	-
87C	Wurtsboro flaggy loam, 8 to 15 percent slopes, moderately eroded	287
87-C-2	(Combined with 87C)	-
87-CD-1	(Combined with 88B)	-
88-AB-1	(Combined with 88B)	-
88B	Wurtsboro very stony loam, 0 to 8 percent slopes	954
88-CD-1	(Combined with 88D)	-
88D	Wurtsboro very stony loam, 8 to 25 percent slopes	1,085
97	Mucky peat	2,003
97A	(Combined with 97)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I
LACKAWANNA
COUNTY, PENNSYLVANIA
PAGE 10 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
99-ARCD-1 99-AD	(Combined with 99D)	-
99D	Very stony land and rock land, 0 to 25 percent slopes	10,347
99-EF 99-EF-1	(Combined with 99F)	-
99F	Very stony land and rock land, 25 to 120 percent slopes	8,641
100B	Urban land, 0 to 8 percent slopes	7,342
100D	Urban land, 8 to 25 percent slopes	5,880
101A	Urban land, alluvial materials, 0 to 5 percent slopes	774
114B	Williamson silt loam, 3 to 8 percent slopes	-
127-AB-1 127B	(Combined with 77B)	-
127-CD-1 127D	(Combined with 77D)	-
133-AB-1	(Combined with 133B)	-
133B	Morris extremely stony loam, 0 to 8 percent slopes	1,497
133-CD-1	(Combined with 33D)	-
143-AB-1 143B	(Combined with 43B)	-
143-CD-1	(Combined with 143D)	-
143D	Oquaga extremely stony loam, 8 to 25 percent slopes	2,084
143-EF-1 143F	(Combined with 43F)	-
147-AB-1	(Combined with 147B)	-
147B	Lordstown extremely stony silt loam, 0 to 8 percent slopes	1,110
147-CD-1	(Combined with 147D)	-
147D	Lordstown extremely stony silt loam, 8 to 25 percent slopes	3,411
147-EF-1 147F	(Combined with 43F)	-
153B	Bath extremely stony silt loam, 0 to 8 percent slopes	1,852
153D	Bath extremely stony silt loam, 8 to 25 percent slopes	2,274
157B	Mardin extremely stony silt loam, 0 to 8 percent slopes	1,930
157D	Mardin extremely stony silt loam, 8 to 25 percent slopes	1,827
163-AB-1	(Combined with 163B)	-
163B	Volusia extremely stony loam, 0 to 8 percent slopes	4,339

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I
LACKAWANNA COUNTY, PENNSYLVANIA

 PAGE 11 OF 12

MAP SYMBOL	TENTATIVE SOIL NAME	ACRES MAPPED
18A	Swartswood extremely stony loam, 0 to 8 percent slopes	951
18B	Swartswood extremely stony loam, 8 to 25 percent slopes	917
18C	Wurtsboro extremely stony loam, 0 to 8 percent slopes	298
241A 241A-1	(Combined with 42B)	-
241B 241B-1	(Combined with 42B)	-
241C 241C-1	(Combined with 48D)	-
243A 243A-1	(Combined with 50B)	-
243B 243B-1	(Combined with 50D)	-
243C 243C-1	(Combined with 50F)	-
251A 251A-1	(Combined with 35A)	-
251B 251B-1	(Combined with 35B)	-
251C 251C-1	(Combined with 61C)	-
253A 253B	(Combined with 37B)	-
347A 347A-1	(Combined with 16A)	-
348A	Birdsall silt loam	415
348B 348B-1	(Combined with 348A)	-
MA-AB	(Combined with 101A)	-
MB	Mine dump, burning or burned	306
MBC	(Combined with MB)	-
MBF	(Combined with MB)	-
MD	Mine dump	4,889
MD-ABC	(Combined with MD)	-
MD-B-ABC MD-B-DEF	(Combined with MB)	-
MDC MD-DEF MD-F	(Combined with MD)	-

NUMERICAL LEGEND AND ACRES MAPPED

TABLE I

LACKAWANNA COUNTY, PENNSYLVANIA

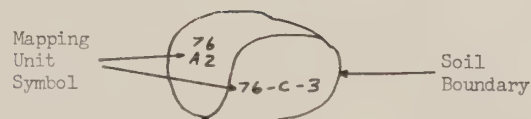
PAGE 12 OF 12

MA- NAME	TENTATIVE SOIL NAME	ACRES MAPPED
ML-A ^P ML-CD	(Combined with 100 ^P)	-
MS	Strip mine spoil	1,443
MS-A ^P MS ^P MS ^P MS ^P MS ^P MS-E ^P MSF	(Combined with MS)	-
MW MW-A	(Combined with MD) Miscellaneous	- 6,141
	Total	<hr/> 290,560

USDA - WASHINGTON, D.C. 20250

SYMBOLS USED ON THE SOIL MAPS

1. Soil boundaries and symbols



2. Other Boundaries, Marks and Monuments

State line -----
 County line -----
 Land use boundary -----
 Survey match line -----

Pond or or
 Intermittent pond or lake or
 Spring
 Wet spot
 Swamp or marsh
 Falls
 Dike or levee

3. Works or Structures

Good motor road ----- or =====
 Poor motor road -----
 Trail -----
 Single track railroad
 Multitrack railroad
 Abandoned railroad
 Bridge
 House
 Church
 School
 Cemetery
 Gravel pit or
 Abandoned iron mine holes or
 Pipe line
 Power line

5. Relief and Special Symbols

Bedrock escarpment
 Other escarpment
 Rock outcrop
 Gravelly or cobbly
 Clay spot
 Sandy spot
 Stony
 Eroded spot
 Small gully
 Large gully
 Sinkhole, crossable
 Sinkhole, noncrossable
 Water tank
 Swimming pool
 Reservoir
 Fire tower
 Made land

4. Drainage

Perennial stream
 Intermittent streams:
 Crossable.
 Not crossable
 Unclassified



SOIL SURVEY MAP INDEX

LACKAWANNA COUNTY PENNSYLVANIA

PREPARED BY:

Lackawanna County Regional Planning Commission

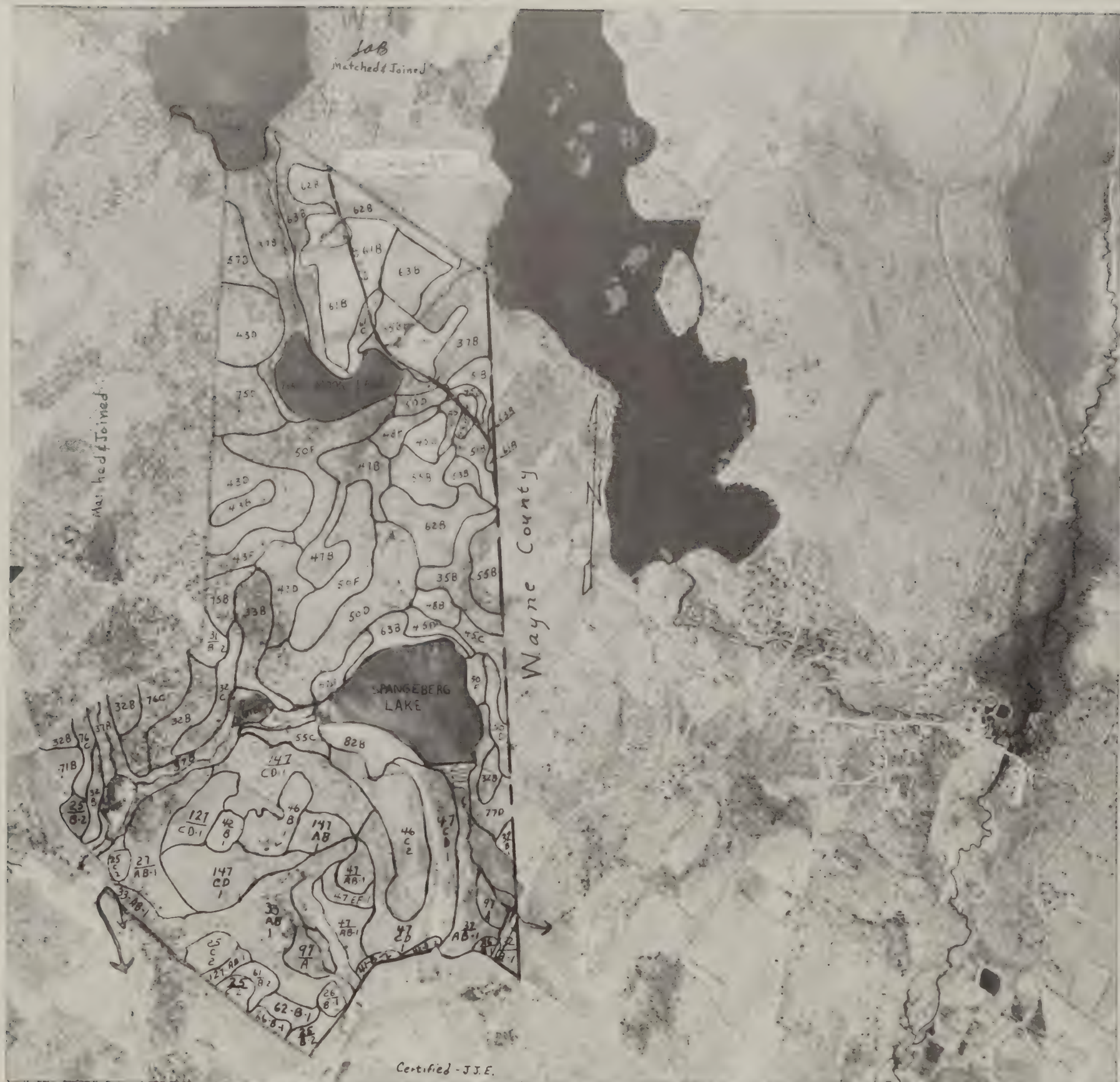
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U.S. Dept. Of Agriculture Soil Conservation Service

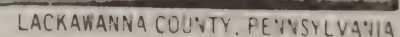
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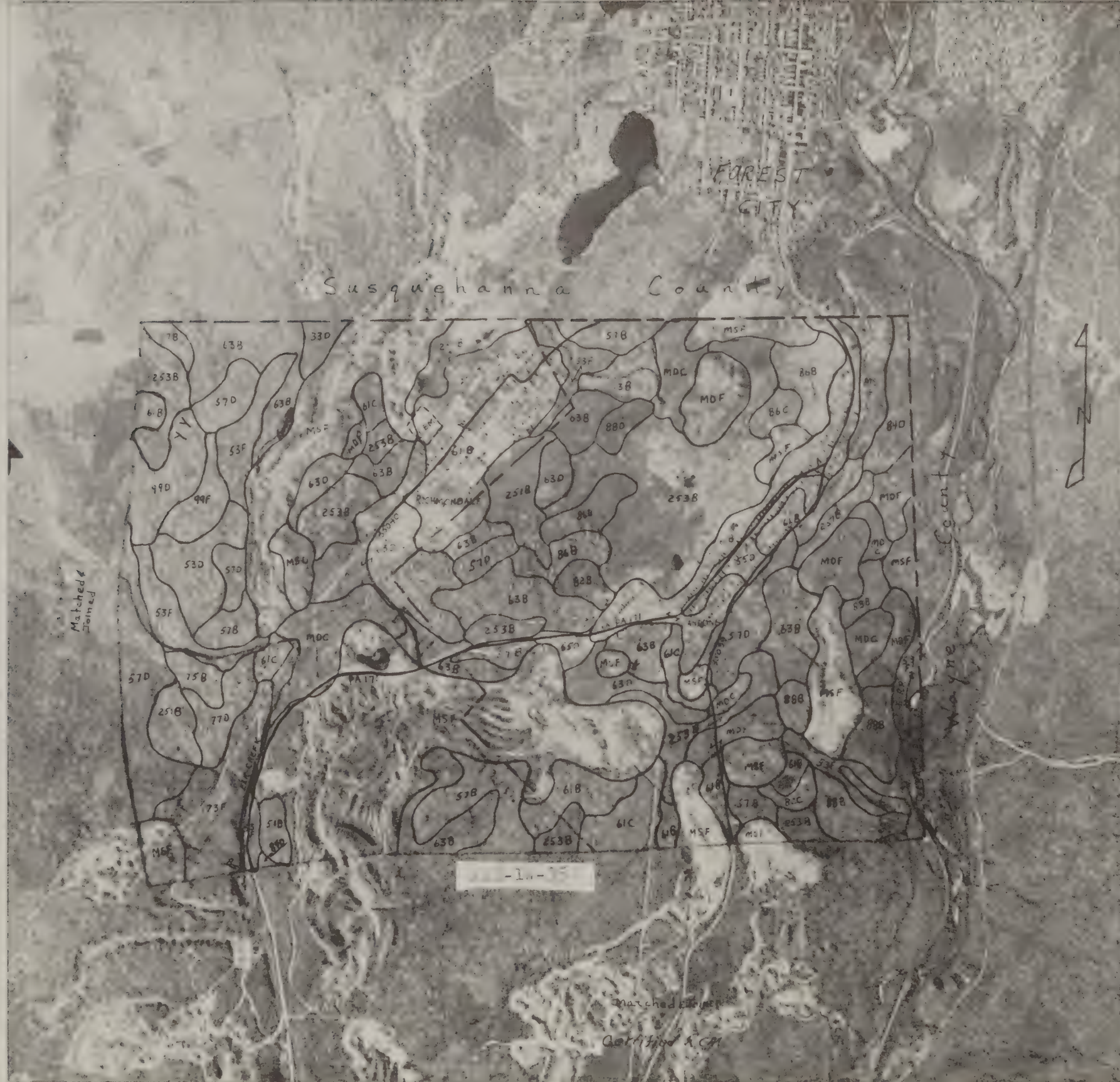


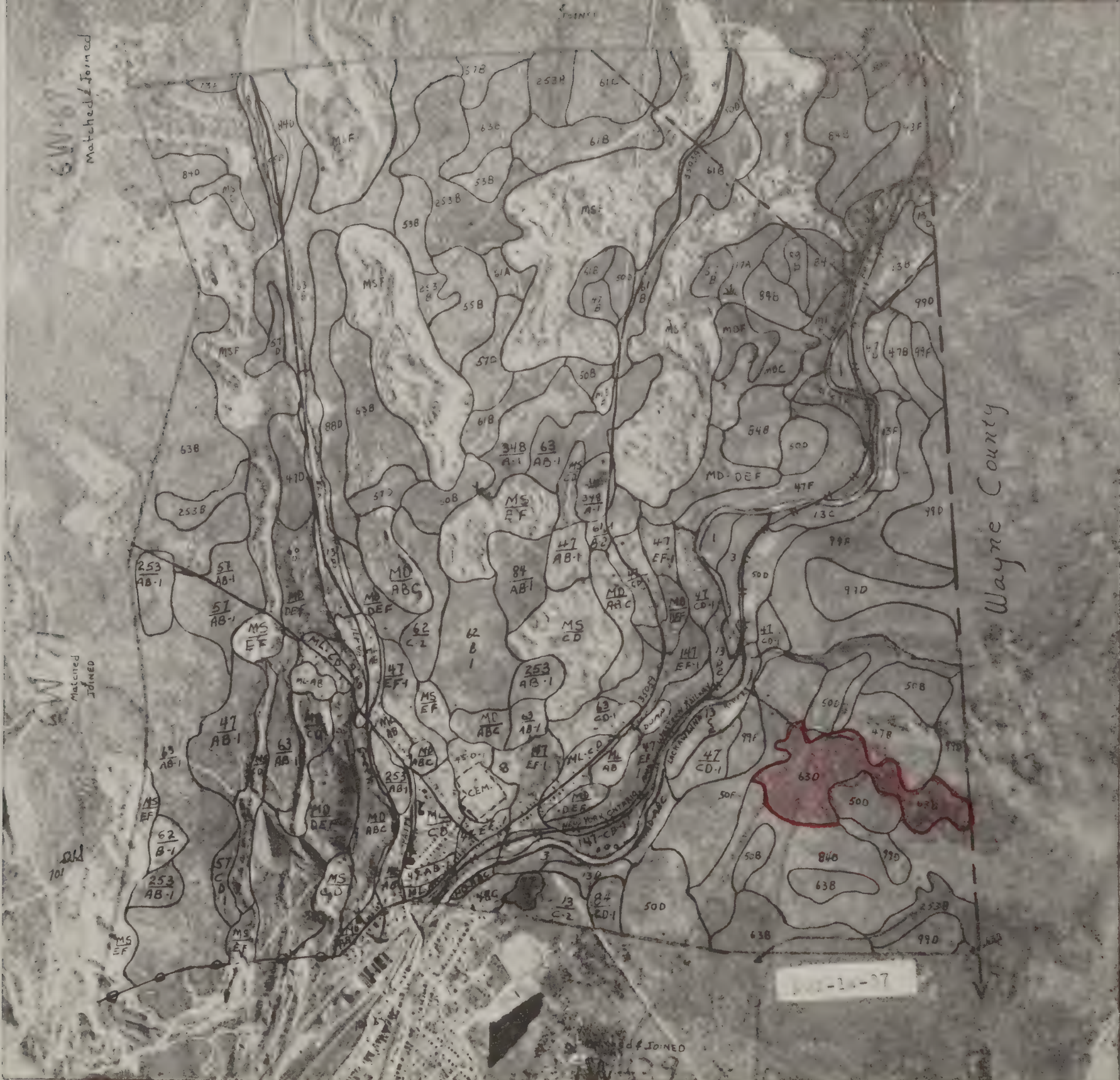


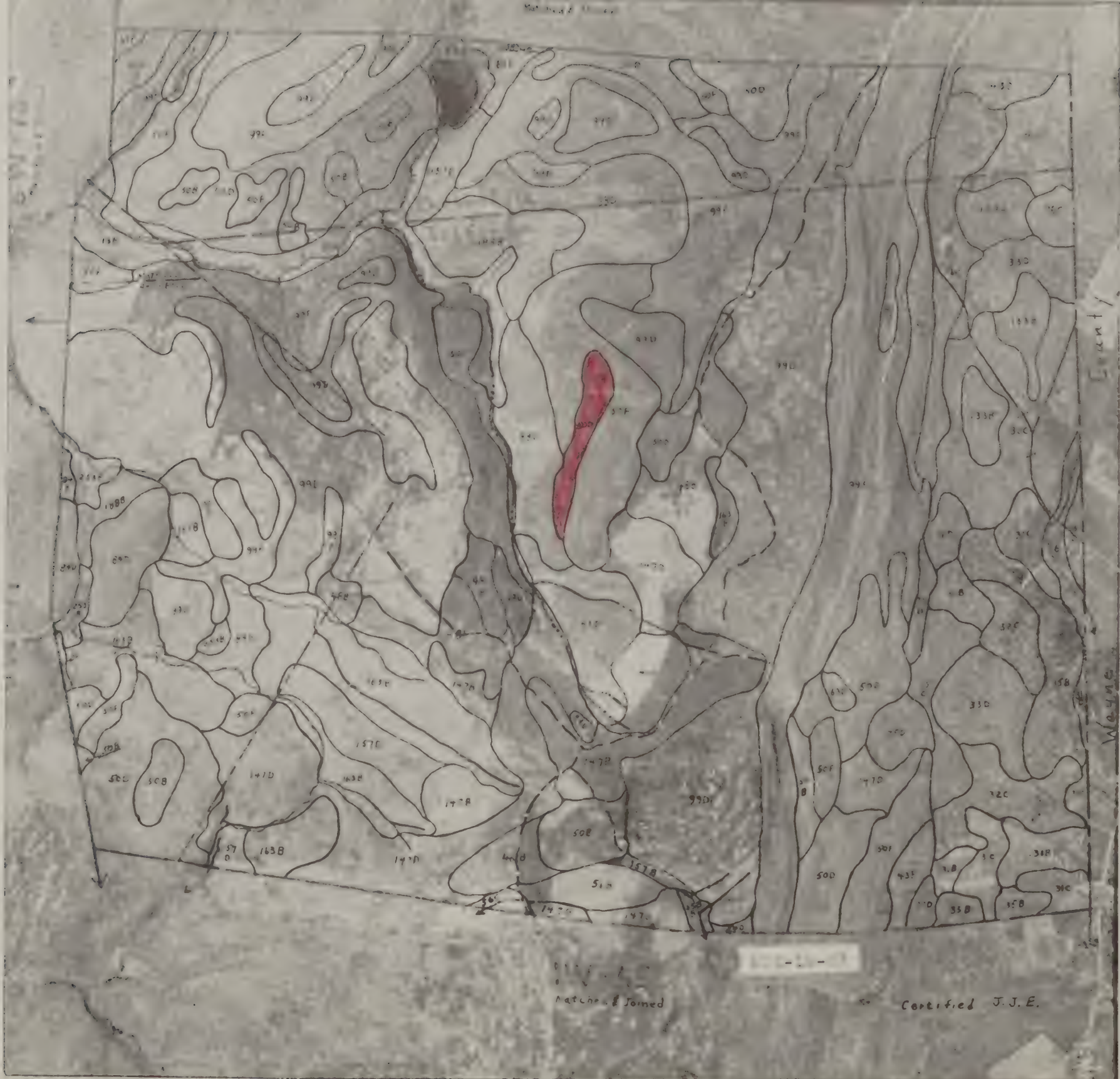
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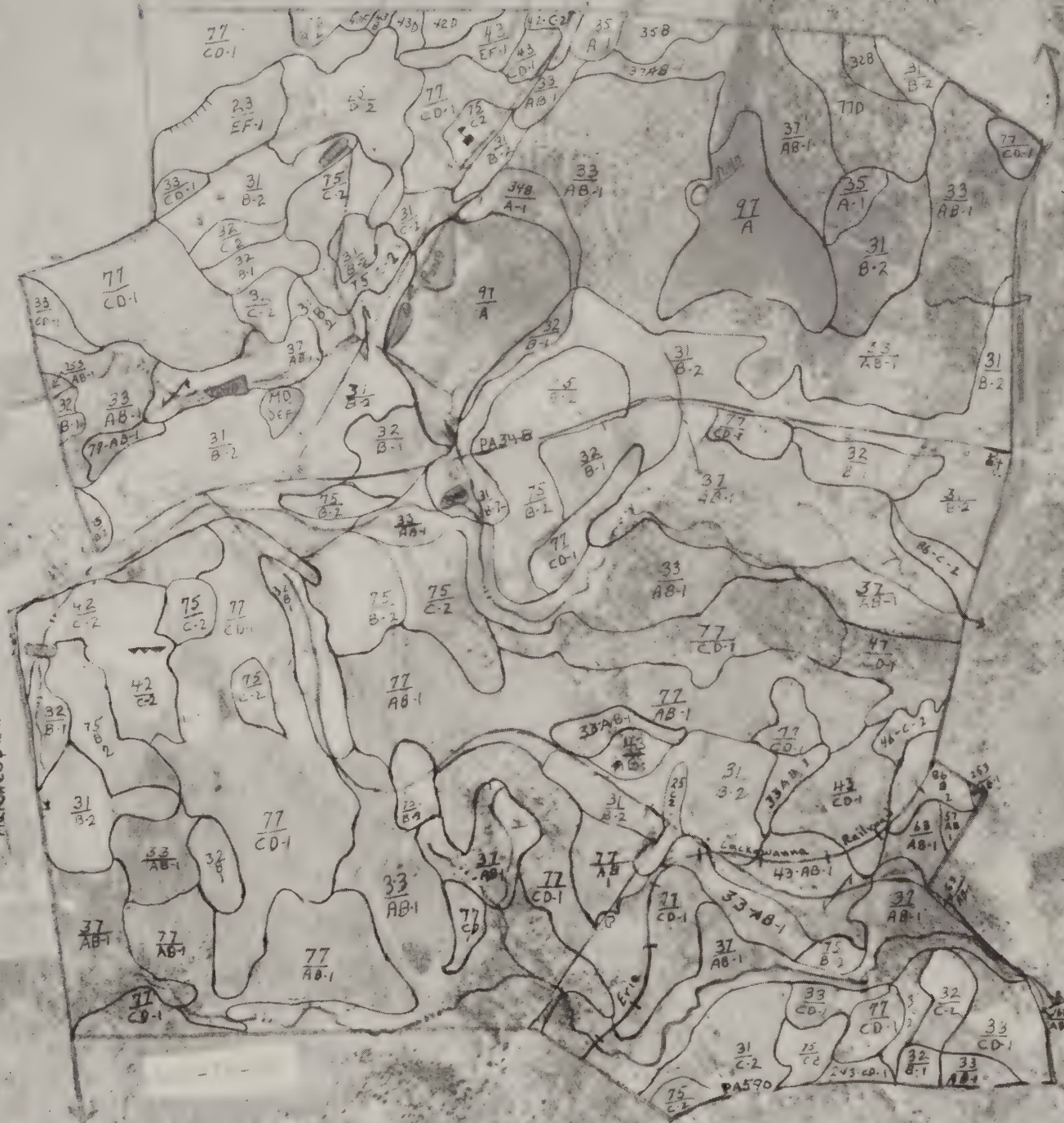








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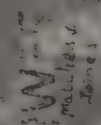


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S. A. BROWNING 10-265
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701 SW

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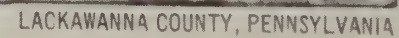
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701 SW

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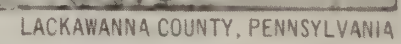
Correlated with 701 SW

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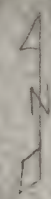












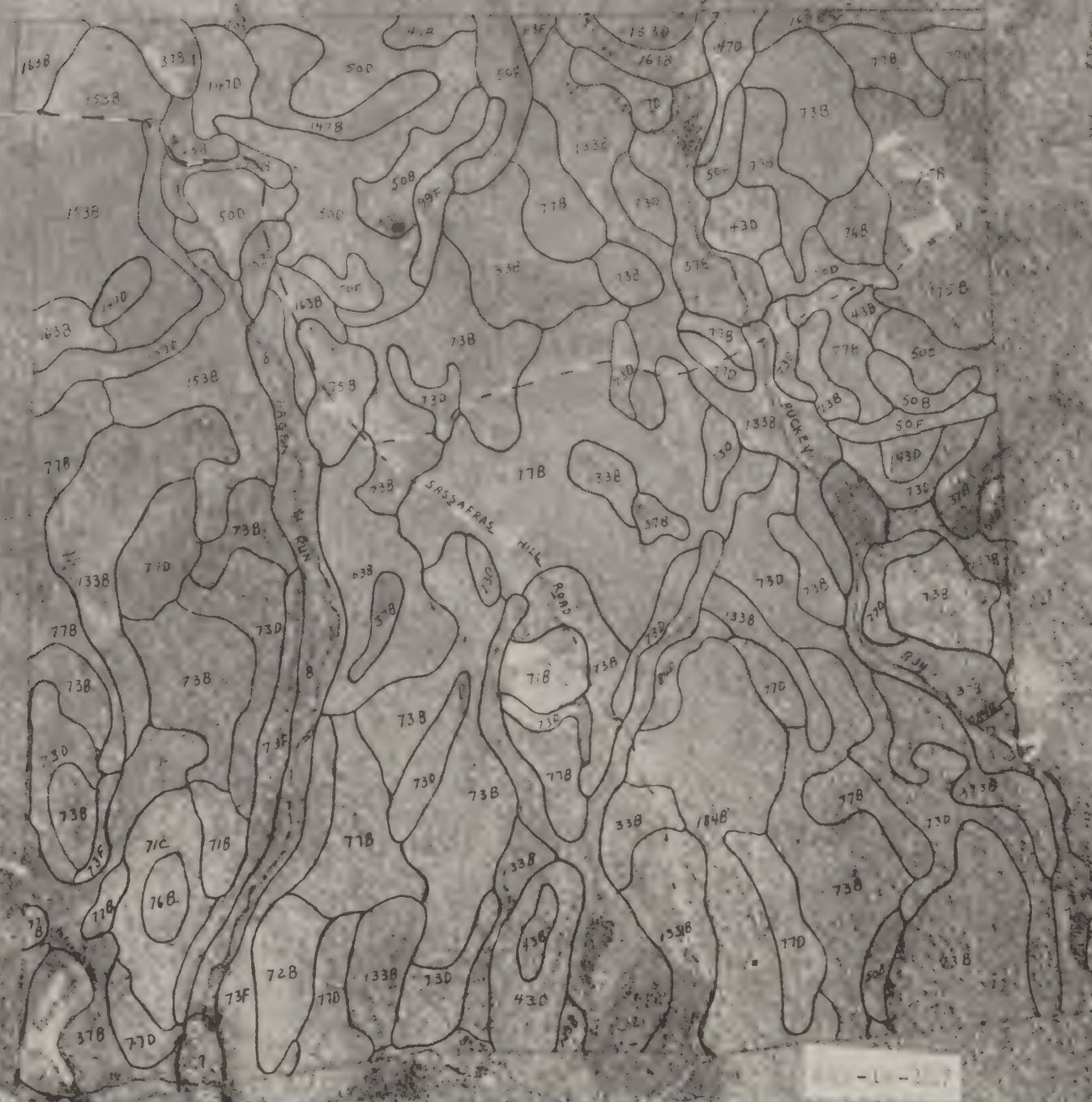
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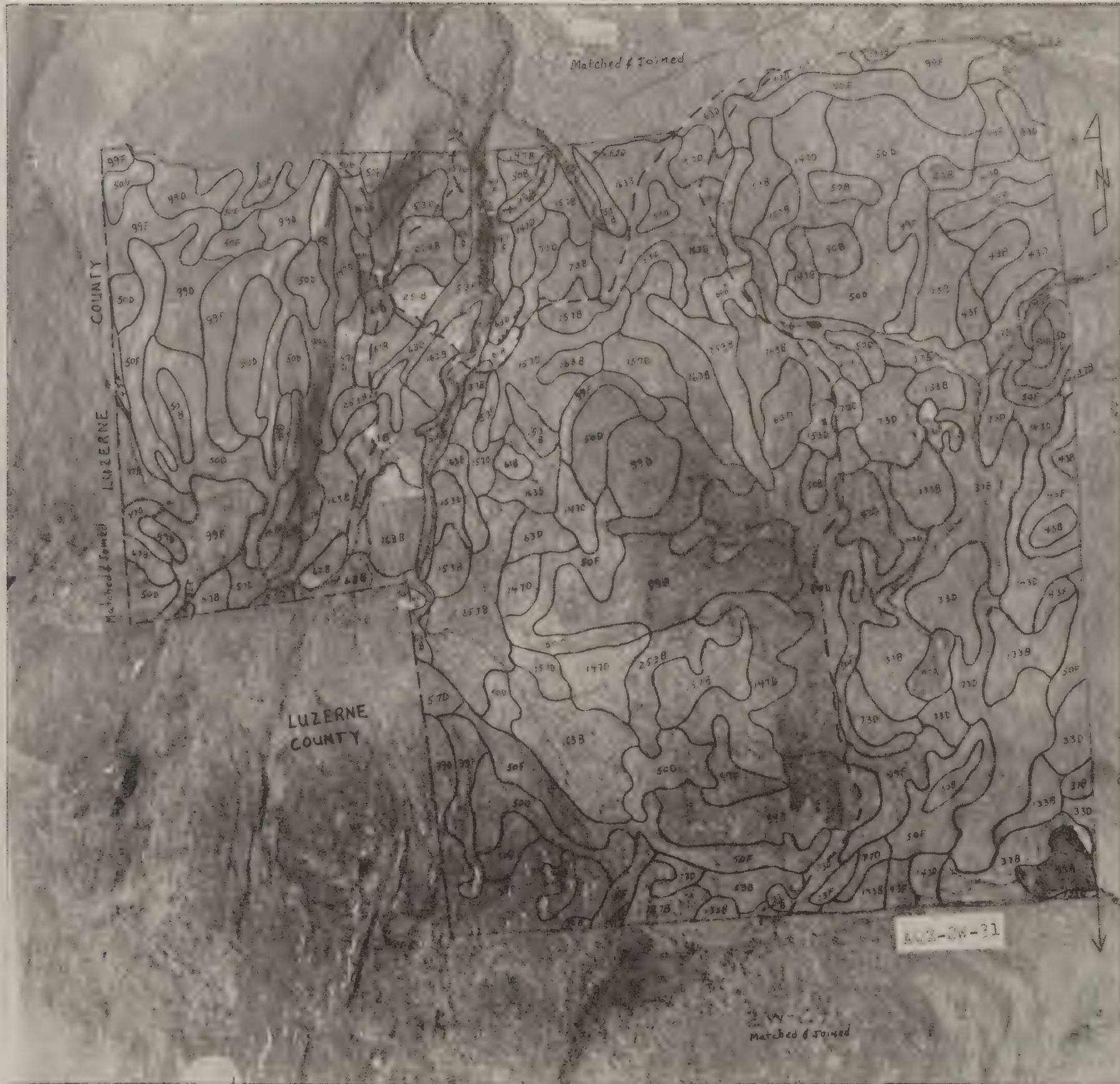
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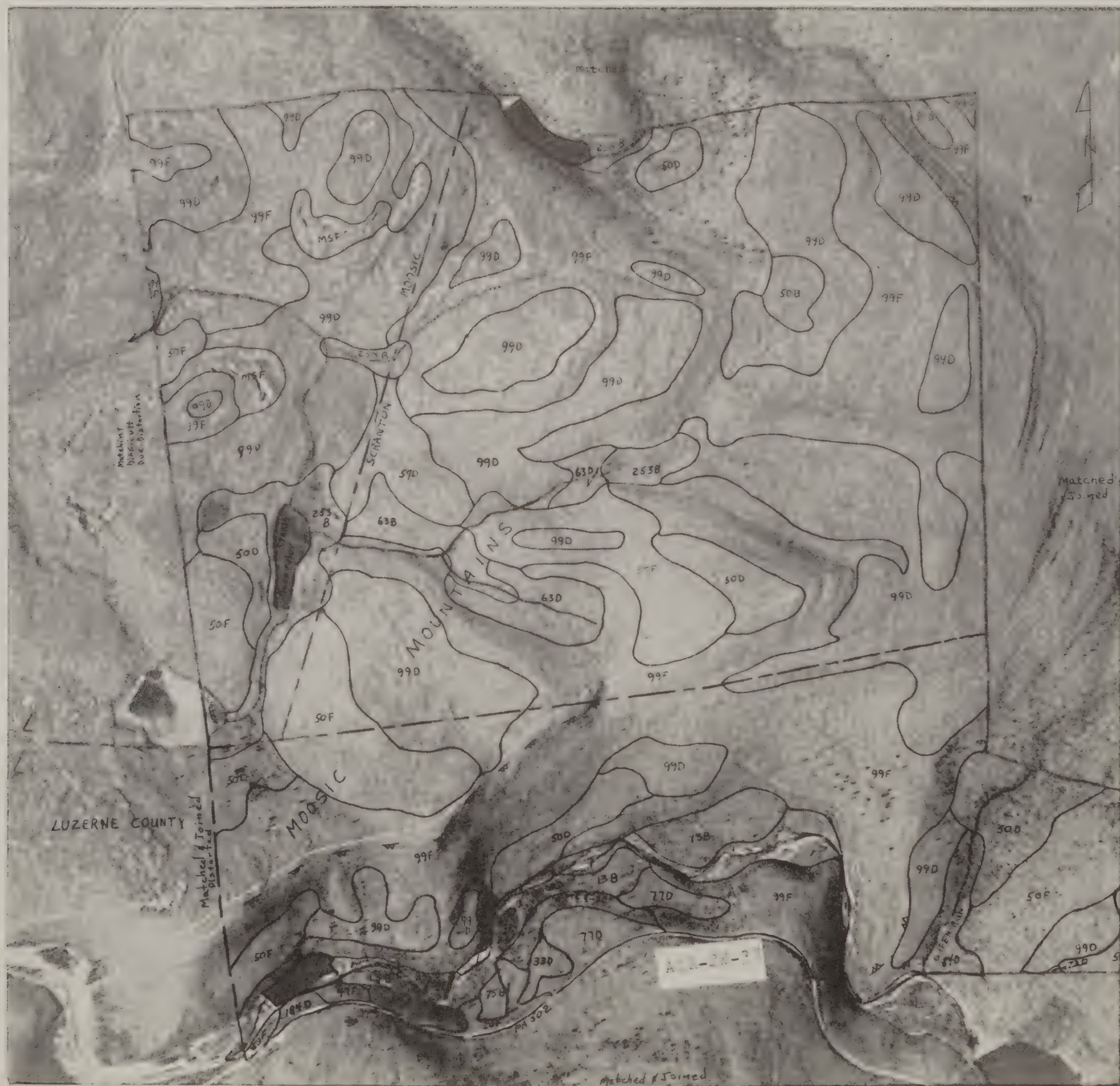
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S. A. BROWNING 4-66



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1W-143
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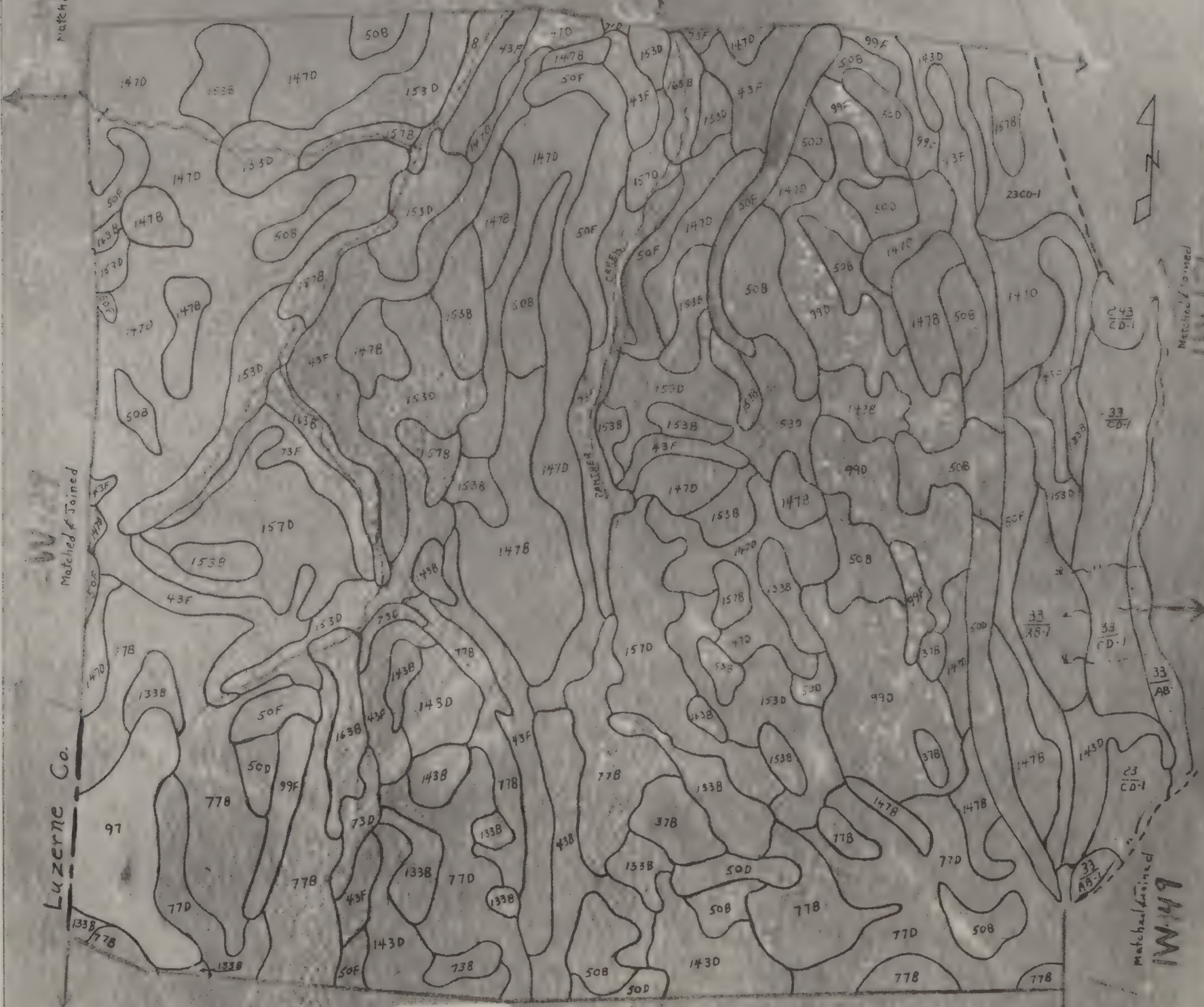
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Luzerne Co.

W.H.M.
Michael Malone

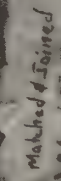
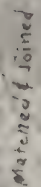
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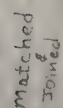


March 1st 1902



matched joined

A simple line drawing of a house with a chimney. The house has a rectangular body and a triangular roof. A chimney is located on the right side of the roof. The drawing is done in a sketchy, hand-drawn style.



matched & joined

Joined & matched

11/10/1914

matched & Joined
Certified RCM

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W-102

Photo too distorted
To join

ADVANCE SURVEY PROJECTS

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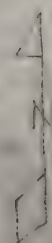
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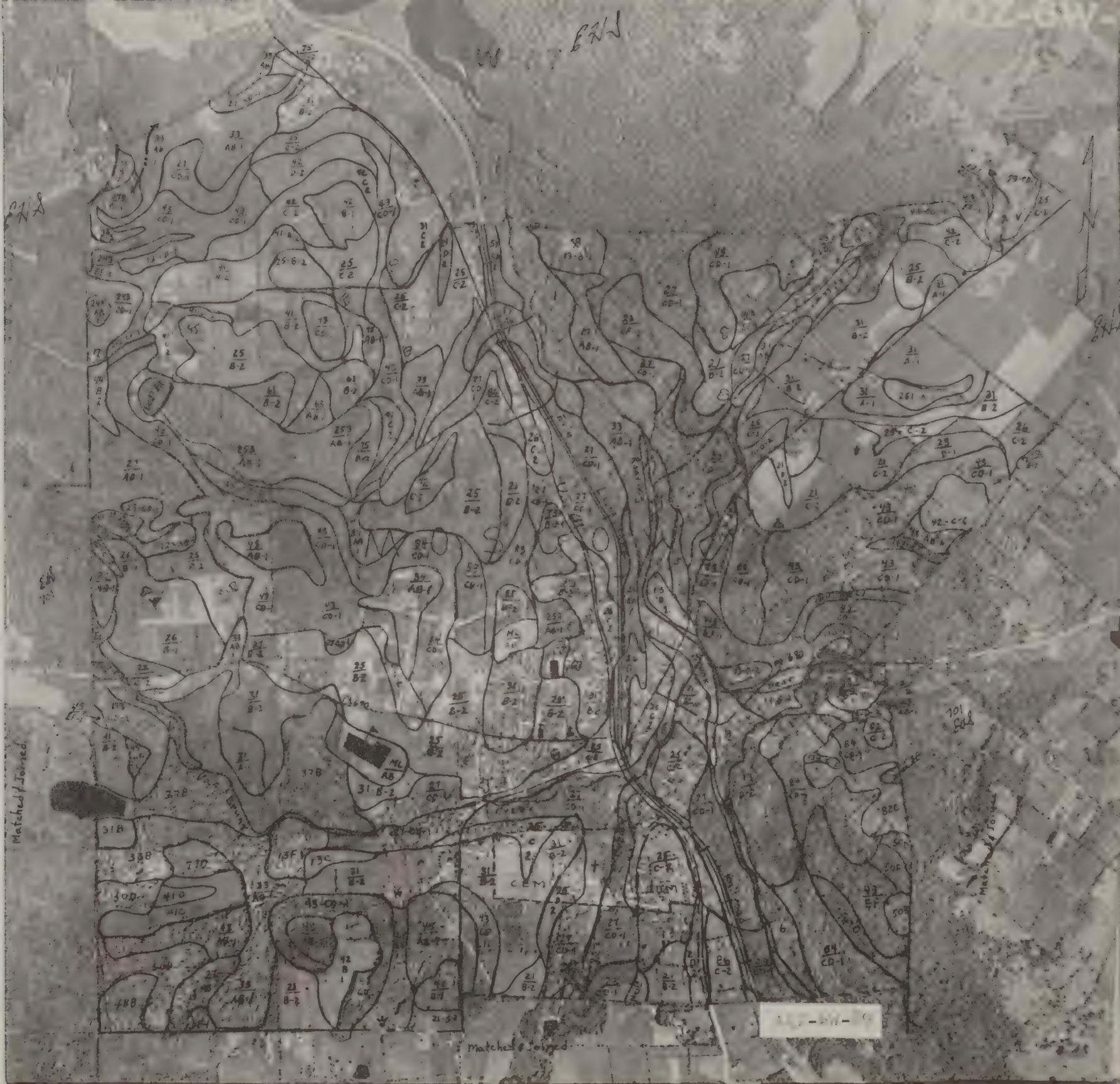
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6W-87

S. A. BROWNING 10-65



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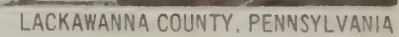
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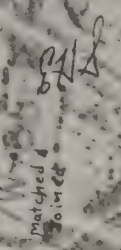
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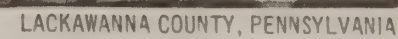




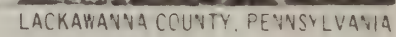










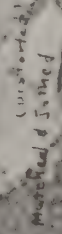




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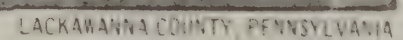


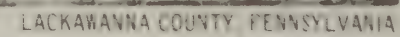




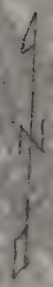








Ms. A. 8. 9. 9.



1997

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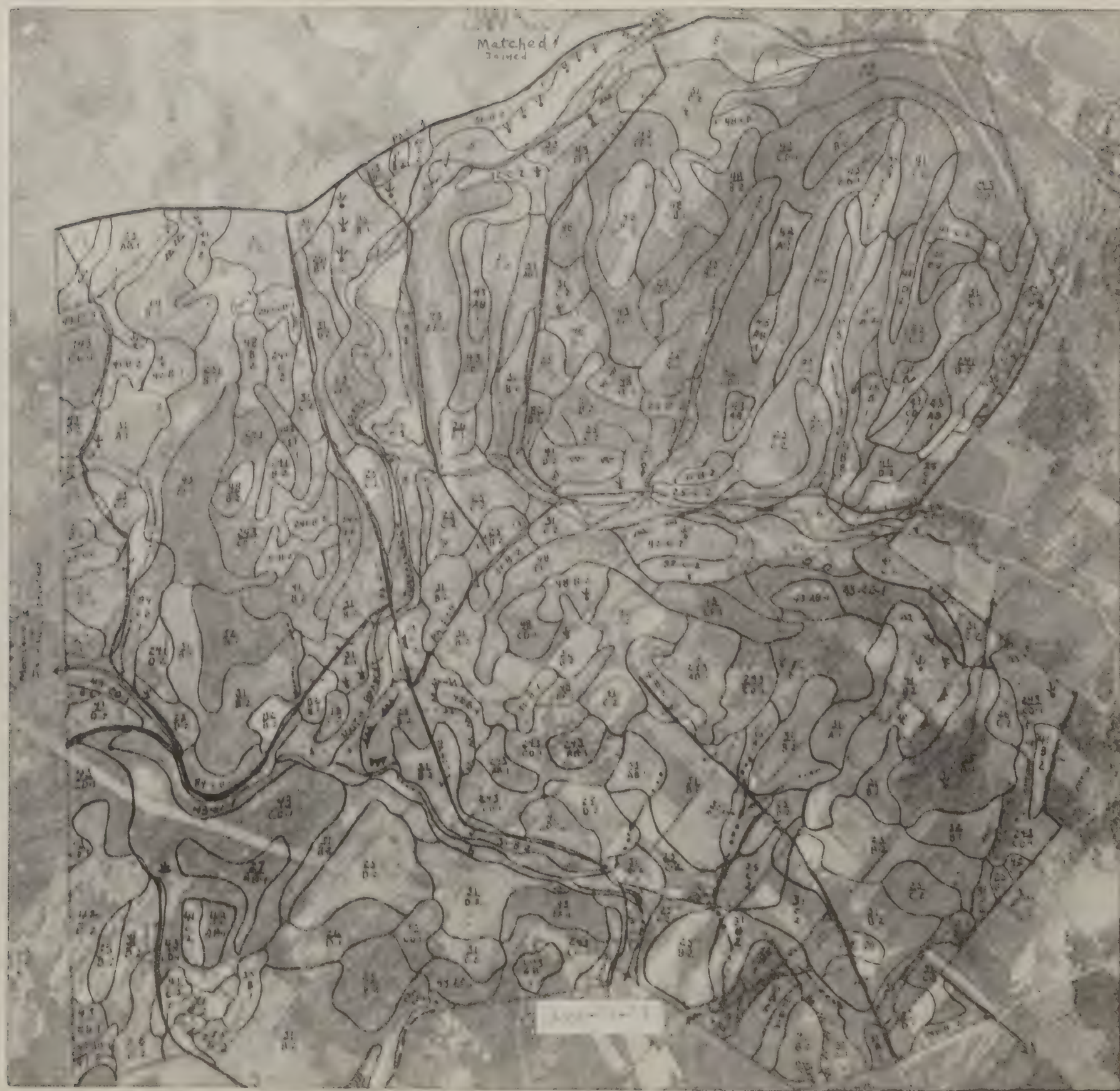




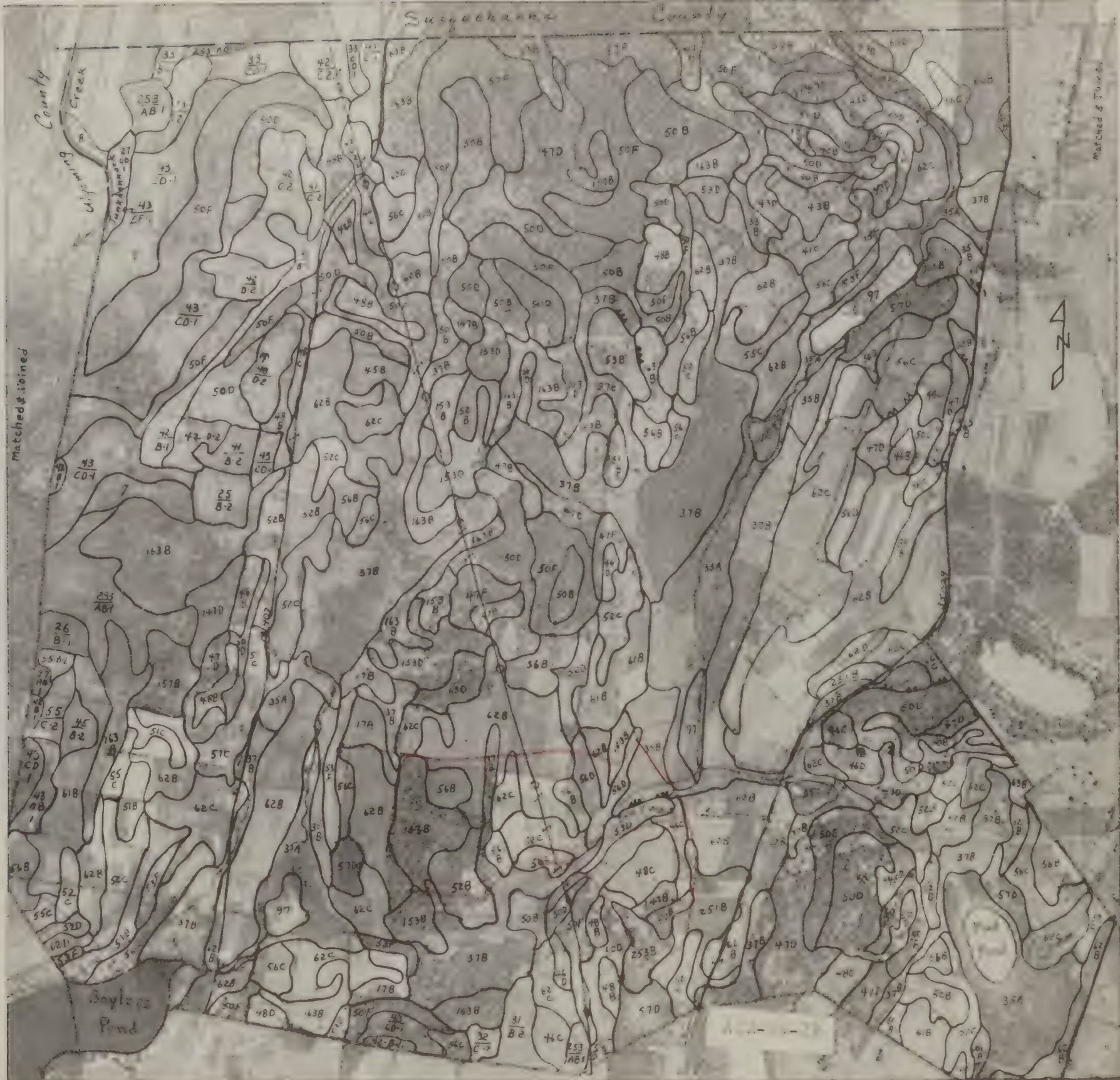








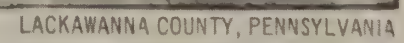




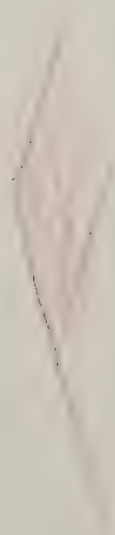




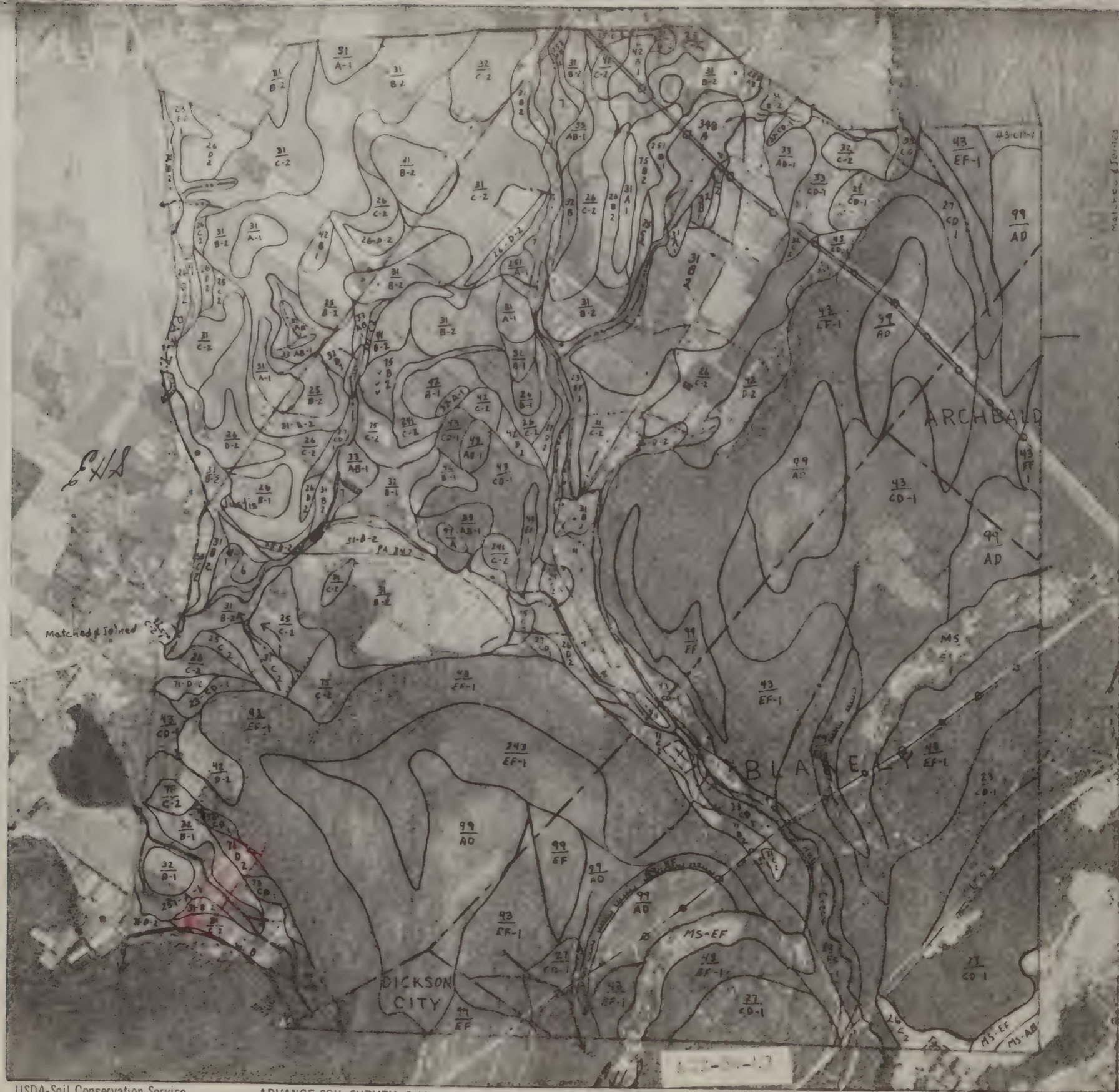


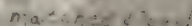


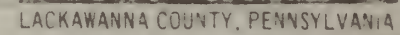
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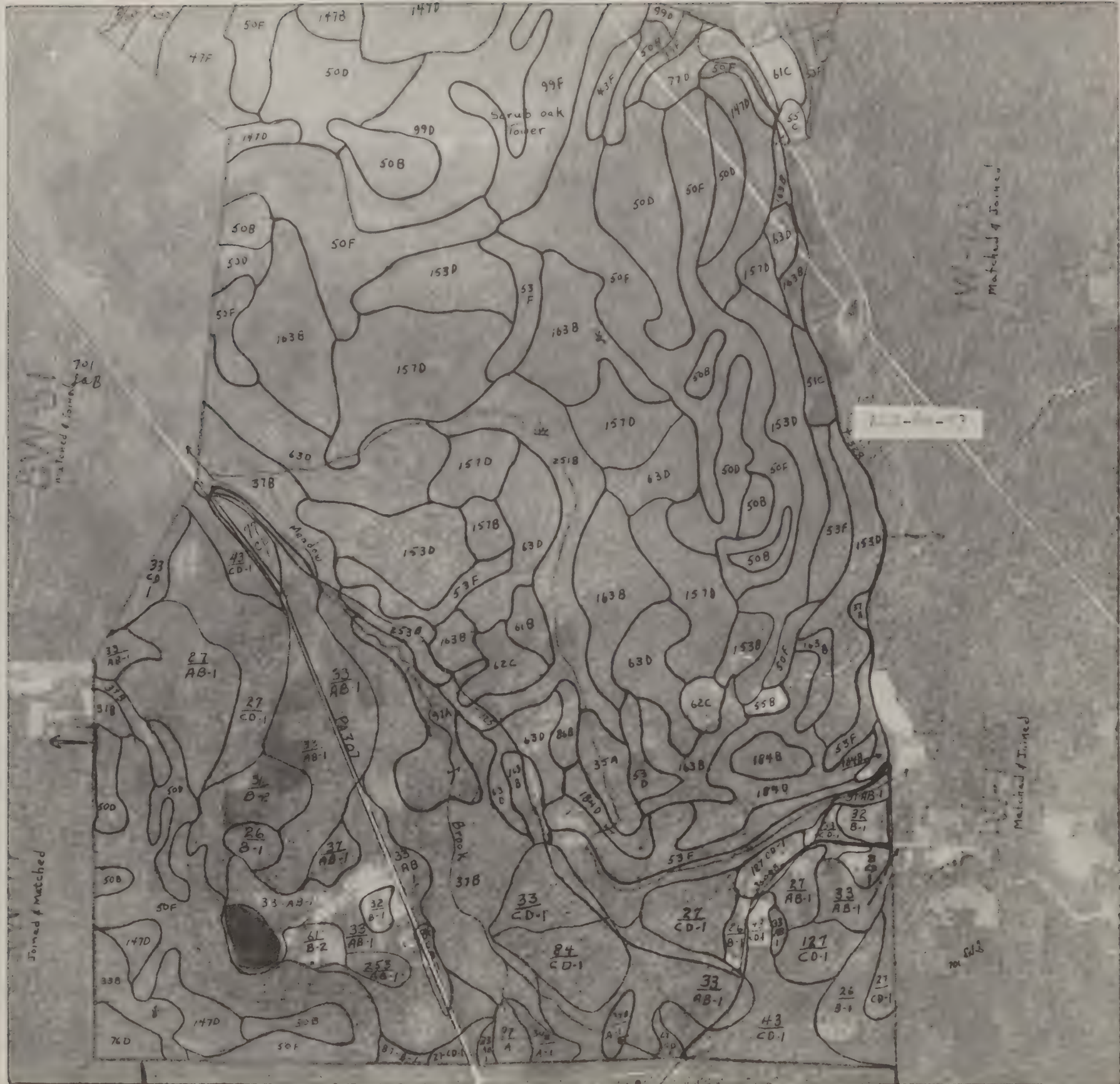






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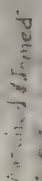




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1W-73

Certified - J. J. E.

AQZ-BW-79

Monroe

County

Wayne County

US 611

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